AMENDMENTS TO THE CLAIMS

1. (currently amended): A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein the predetermined rate (ratio) is predetermined prior to acquiring the image data by said acquiring image data step.

2. (currently amended): ~~The method as set forth in claim 1,~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said image acquisition device is a digital camera and the adjustment to said image is a pre-photography adjustment to an exposure value using previously acquired image data.

3. (currently amended): ~~The method as set forth in claim 1,~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said pixel value is a value expressed in terms of a linear scale or power scale and wherein the adjustment to said image is made based on the following transformation Eq. (1):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = k \begin{pmatrix} R \\ G \\ B \end{pmatrix} \quad \ldots \qquad (1)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

4. (currently amended): ~~The method as set forth in claim 1~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said pixel value is a value expressed in terms of a logarithmic scale and the adjustment to said image is made based on the following transformation Eq. (2):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = \begin{pmatrix} R \\ G \\ B \end{pmatrix} + \begin{pmatrix} k \\ k \\ k \end{pmatrix} \quad \ldots \qquad (2)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

5. (cancelled)

6. (currently amended) ~~The method as set forth in claim 5,~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio)

wherein said image acquisition device is a data acquisition device for acquiring an image as digital data and the adjustment to said image is a data transformation process of transforming the acquired digital data,

wherein said pixel value is a value expressed in terms of a linear scale or power scale and said data transformation process is a process based on the following transformation Eq. (1):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = k \begin{pmatrix} R \\ G \\ B \end{pmatrix} \ldots \qquad (1)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

7. (currently amended): ~~The method as set forth in claim 5~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said image acquisition device is a data acquisition device for acquiring an image as digital data and the adjustment to said image is a data transformation process of transforming the acquired digital data

wherein said pixel value is a value expressed in terms of a logarithmic scale and said data transformation process is a process based on the following transformation Eq. (2):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = \begin{pmatrix} R \\ G \\ B \end{pmatrix} + \begin{pmatrix} k \\ k \\ k \end{pmatrix} \quad \ldots \qquad (2)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

8. (currently amended): The method as set forth in any one of claims ~~1 through 7~~, 1, 2, 3, 4, 6 and 7 wherein said brightness is defined by the following Eq. (3):

$$L = \max(R, G, B) \qquad (3)$$

where L is the brightness of a pixel; R, G, and B are the three components; and max(x, y, z) is the maximum value among x, y, and z.

9. (previously presented): A digital camera comprising:

image pick-up means for photographing an image and acquiring image data in which a pixel value of each pixel is expressed as a set of three mutually independent components;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said three components for said image data acquired by said image pick-up means; and

exposure control means for automatically making an adjustment to an exposure value at the time of photographing according to said histogram so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio).

10. (canceled)

11. (canceled)

12. (previously presented): The digital camera as set forth in claim 9 , wherein said brightness is defined by the following Eq. (3):

$$L = \max(R, G, B) \qquad (3)$$

where L is the brightness of a pixel; R, G, and B are the three components; and max(x, y, z) is the maximum value among x, y, and z.

13. (currently amended) An image processor comprising:

data acquisition means for acquiring an image as digital data in which a pixel value of each pixel is expressed as a set of three mutually independent components;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said three components for said digital data acquired by said data acquisition means; and

data transformation means for automatically performing a data transformation process on the acquired digital data according to said histogram so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein the predetermined rate (ratio) is predetermined prior to acquiring the image by said data acquisition means.

14. (currently amended): ~~The image processor as set forth in claim 13~~, An image processor comprising:

data acquisition means for acquiring an image as digital data in which a pixel value of each pixel is expressed as a set of three mutually independent components;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said three components for said digital data acquired by said data acquisition means; and

data transformation means for automatically performing a data transformation process on the acquired digital data according to said histogram so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said pixel value is a value expressed in terms of a linear scale or power scale and said data transformation process is process based on the following transformation Eq. (1):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = k \begin{pmatrix} R \\ G \\ B \end{pmatrix} \ldots \qquad (1)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

15. (currently amended): ~~The image processor as set forth in claim 13~~, An image processor comprising:

data acquisition means for acquiring an image as digital data in which a pixel value of each pixel is expressed as a set of three mutually independent components;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said three components for said digital data acquired by said data acquisition means; and

data transformation means for automatically performing a data transformation process on the acquired digital data according to said histogram so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said pixel value is a value expressed in terms of a logarithmic scale and said data transformation process is a process based on the following transformation Eq. (2):

$$\begin{pmatrix} R' \\ G' \\ B' \end{pmatrix} = \begin{pmatrix} R \\ G \\ B \end{pmatrix} + \begin{pmatrix} k \\ k \\ k \end{pmatrix} \quad \ldots \qquad (2)$$

where R', G', and B' are the three components after a transformation; R, G, and B are the three components before a transformation; and k is a constant determined according to said rate.

16. (original): The image processor as set forth in any one of claims 13 through 15, wherein said brightness is defined by the following Eq. (3):

$$L = \max(R, G, B) \qquad (3)$$

where L is the brightness of a pixel; R, G, and B are the three components; and max(x, y, z) is the maximum value among x, y, and z.

17. (currently amended) A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a color value;

defining the brightness of each pixel based on said color value and;

making an adjustment to said pixel value so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein the predetermined rate (ratio) is predetermined prior to acquiring the image data by said acquiring image data step.

18. (previously presented) A digital camera comprising:

image pick-up means for photographing an image and acquiring image data in which a pixel value of each pixel is expressed as a color value;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said color value for said image data acquired by said image pick-up means; and

exposure control means for automatically making an adjustment to an exposure value at the time of photographing according to said histogram so that a rate of pixels having a maximum brightness among all pixels is equal to a predetermined rate.

19. (currently amended) An image processor comprising:

data acquisition means for acquiring an image as digital data in which a pixel value of each pixel is expressed as a color value;

brightness analyzing means for computing a histogram of the brightness of said pixel defined based on said color value for said digital data acquired by said data acquisition means; and

data transformation means for automatically performing a data transformation process on the acquired digital data according to said histogram so that a rate of pixels having a maximum brightness among all pixels is equal to a predetermined rate,

wherein the predetermined rate (ratio) is predetermined prior to acquiring the image data by said acquiring image data step.

20. (currently amended) ~~The method of adjusting the brightness of an image as set forth in claim 1~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a set of three mutually independent components;

defining the brightness of each pixel based on said three components and;

making an adjustment to said image so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said adjustment is a pre-exposure adjustment to an exposure value using previously acquired image data.

21. (currently amended) ~~The image processor as set forth in claim 13~~ An image processor comprising:

data acquisition means for acquiring an image as digital data in which a pixel value of each pixel is expressed as a set of three mutually independent components;

brightness analyzing means for computing a histogram of the brightness of said ixel defined based on said three components for said digital data acquired by said data acquisition means; and

data transformation means for automatically performing a data transformation process on the acquired digital data according to said histogram so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein the said data transformation process is a pre-exposure adjustment to an exposure value using previously acquired image data.

22. (currently amended) ~~The method of adjusting the brightness of an image as set forth in claim 17~~ A method of adjusting the brightness of an image, the method comprising the steps of:

acquiring image data by an image acquisition device;

expressing a pixel value of each pixel in said image data as a color value;

defining the brightness of each pixel based on said color value and;

making an adjustment to said pixel value so that a rate (ratio) of pixels having a maximum brightness is equal to a predetermined rate (ratio),

wherein said adjustment is a pre-exposure adjustment to an exposure value using previously acquired image data.

23. (previously presented) The image processor as set forth in claim 19, wherein said data transformation process is a pre-exposure adjustment to an exposure value using previously acquired image data.

24. (cancelled)